IN THE CLAIMS:

Cancel Claims 21-43, 46-49, 51-53 and 55 without prejudice and amend Claims 45 and 54 as follows:

Claims 1-43. Canceled

44. (Previously Presented) A device for detecting optical signals, comprising

means (10,11, 20, 80) structured and arranged for generating at least one reference light ray which has at least one of

(i) frequency shift or frequency modulation or both;

(ii) phase shift or phase modulation or both; and

(iii) time displacement,

all (i)-(iii) relating to the optical signal to be detected;

means (20, 30) structured and arranged for aligning at least one of the signals and reference light ray(s) such that they can be brought into interference; and

a detector (40) with a demodulator (50) being structured and arranged to detect amplitude modulation of a resulting signal from said interference;

wherein a wavelength-dependent element (11, 12, 14) is structured and arranged to change angle(s) of at least one of the optical signals and reference ray(s) being brought into interference depending upon wavelength;

said detector (40) is structured and arranged to measure at least one of time and spatial modulation of intensity of at least part of cross-section of the resulting detected signal;

structured and arranged for using a ray path of a Michelson interferometer, and comprising

a beam splitter (10),

a prism (12) structured and arranged as the wavelength dependent element,

a mirror (20) and means for shifting the same to constitute a phase modulator,

another mirror (30) pivotally provided to select the wavelength to be detected,

the detector (40) structured and arranged to integrate intensity over the entire cross-section of the ray to be detected,

a lock-in amplifier as the demodulator (50), and

a modulator control (60) structured and arranged for controlling the first mirror (20) as the phase modulator.

45. (Currently amended) ~~The~~ A device ~~in accordance with claim 22,~~ for generating optical signals by modulation of optical carriers, comprising

means structured and arranged for generating at least one reference light ray which has at least one of

(i) frequency shift or frequency modulation or both;

(ii) phase shift or phase modulation or both; and

(iii) time displacement,

all (i)-(iii) relating to the optical signal to be modulated;

means structured and arranged for aligning an optical signal carrier and at least one of the reference light ray(s) such that they can be brought into interference; and

a coupler structured and arranged to collect a resulting signal from said interference and direct the signal where the resulting signal exhibits modulation;

wherein an angular dispersive element is structured and arranged to change angle(s) of at least one of the optical carrier and reference light ray(s) being brought into interference, depending upon wavelength;

the device is structured and arranged to make the thus coupled-out signal dependent upon at least one of time (amplitude modulation) or spatial modulation of intensity with reference to at least part of cross-section of the resulting interference signal;

structured and arranged for using a ray path of a Michelson interferometer, and comprising

a beam splitter (10),

a prism (12) structured and arranged as the angular dispersive dependent element,

a mirror (20) and means for shifting the same to constitute a phase modulator,

another mirror (30) pivotally provided to select the wavelength to be modulated, and

a modulator control (60) structured and arranged for controlling the first mirror (20) as the phase modulator.

Claims 46-49. Canceled

50. (Previously Presented) A device for detecting or generating optical signals, comprising

a source of a reference light ray,

a beam splitter (10) positioned downstream of said source to receive the reference light ray and split the same into two partial rays,

a prism (12) arranged on a side of the beam splitter (10) and as a wavelength-dependent element,

a first mirror (20) arranged on a side of said beam splitter (10) opposite said incoming reference ray,

means for shifting the first mirror (20) to serve as a phase modulator in reflecting a beam back the beam splitter (10),

a second mirror (30) pivotally arranged on a side of said prism (12) opposite said beam splitter (10) to reflect back and select wavelength of a signal to be detected,

a detector (40) arranged on a side of said beam splitter (10) opposite said prism (12), said detector integrating intensity over a whole cross-section of the ray to be detected,

a lock-in amplifier arranged as a demodulator (50) and coupled to said detector (40), and

a modulator control (60) coupled to both said demodulator (50) and first mirror (20) to act as said shifting means to control the first mirror (20) as the phase modulator.

Claims 51-53. Canceled

54. (Currently Amended) A device ~~in accordance with claim 21~~ for detecting optical signals, comprising

means (10,11, 20, 80) structured and arranged for generating at least one reference light ray which has at least one of

(i) frequency shift or frequency modulation or both;

(ii) phase shift or phase modulation or both; and

(iii) time displacement,

all (i)-(iii) relating to the optical signal to be detected;

means (20, 30) structured and arranged for aligning at least one of the signals and reference light ray(s) such that they can be brought into interference; and

a detector (40) with a demodulator (50) being structured and arranged to detect amplitude modulation of a resulting signal from said interference,

wherein an angular dispersive element (11, 12, 14) is structured and arranged to change angle(s) of at least one of the optical signals and reference ray(s) being brought into interference depending upon wavelength;

said detector (40) is structured and arranged to measure at least one of time and spatial modulation of intensity of at least part of cross-section of the resulting detected signal;

said device is structured and arranged to receive a wavelength-division multiplexed (WDM) communication signal carrying phase-modulated or frequency-modulated data, said WDM communication signal further comprising a plurality of communication channels, each of said channels designated by a respective wavelength;

~~said device is structured and arranged to allow heterodyne detection of a single optical channel with defined wavelength without spatial separation from other optical channels of different wavelength;~~ and

said detector (40) with a demodulator (50) being structured and arranged to demodulate data from the detected channel.

Claim 55. Canceled